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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,607	03/29/2004	Satoru Takase	001701.00202	9742

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WASHINGTON, DC 20001

EXAMINER

TRAN, MICHAEL THANH

ART UNIT	PAPER NUMBER
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2818

DATE MAILED: 06/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/810,607

Applicant(s)

TAKASE, SATORU

Examiner

Michael T Tran

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on March 29, 2004 through April 13, 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-10 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-10 is/are allowed.
- 6) ☒ Claim(s) 2 is/are rejected.
- 7) ☒ Claim(s) 3 and 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 0304.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. In response to the Communications dated April 13, 2004, claims 2-10 are active in this application as a result of the cancellation of claim 1 and the addition of claims 2-10.

Foreign Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a) (d), which papers have been placed of record in the file.

Information Disclosure Statement

3. The information disclosure statement filed March 29, 2004 has been considered.

Claim Objections

4. Claims 3 and 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

It appears that the word —and—should be inserted after the semicolon of claims 2, 5, and 8.

Claim Rejections – 35 U.S.C. § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102

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that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

6. Claim 2 is rejected under 35 U.S.C 102(e) as being anticipated by Shirley [U.S. Patent #6,097,644].

With respect to claim 2, Shirley discloses a method of replacing a defective memory cell comprising: comparing an input address with a defective address stored in a plurality of storage circuits **[...compares the latched row address from the row address buffer 204 to the defective row address DRA received from the bank 232... – column 5, lines 25-35]**, the defective address assigned to a defective memory cell in a plurality of memory blocks; replacing defective memory cells in the plurality of memory blocks with one of a plurality of redundancy units, based on mapping information indicative of a relationship with the redundancy units stored in storage circuits when the input address matches the defective address **[...defective row and the redundant row mapped to replace that row are the same...- column 9, lines 20-30]**.

Allowable Subject Matter

7. Claims 5-10 are allowable over the prior art of record.

8. The following is an Examiner's statement of reasons for the indication of allowable subject matter: the prior art of records does not show (in addition to the other elements in the claim) the following:

- ❖ Wherein the number of storage circuits is smaller than the number of redundancy units.
- ❖ Wherein each of the redundancy units is located adjacent to a corresponding one of the plurality of memory blocks.
- ❖ Comparing an input address with a defective address stored in a plurality of storage circuits, the defective address assigned to a defective memory cell in first memory blocks, second memory blocks being activated independently of the first memory blocks; and replacing defective memory cells in the first memory blocks with one of a plurality of first redundancy units, and defective memory cells in the second memory blocks with one of a plurality of second redundancy units, based on mapping information indicative of a relationship with the first and second redundancy units stored in the storage circuits when the input address matches the defective address.
- ❖ Comparing an input address with a defective address stored in a plurality of storage circuits, the defective address assigned to a defective memory cell in a plurality of memory blocks each to be activated independently; and replacing defective memory cells in the plurality of memory blocks with one of a plurality of

redundancy units, based on mapping information indicative of a relationship with the redundancy units stored in the storage circuits when the input address matches the defective address.

Conclusion

9. When responding to the Office action, Applicants are advised to provide the Examiner with line and page numbers of the application and/or references cited to assist the Examiner in the prosecution of this case.

10. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Michael T. Tran whose telephone number is (571) 272-1795. The Examiner can normally be reached on Monday-Thursday from 7:30-6:00 P.M.

11. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-1650.



Michael T. Tran
Art Unit 2818
May 28, 2004